

5 catheter between said distal end and said proximal end, such motion causing physical movement of said catheter that is sufficient to disturb a thrombus.

C 1 2. (Once Amended) A thrombolytic device as in claim 1, wherein:

C 2 said motor comprising a device selected from the group consisting of a vibrational device, a rotational device, a bi-rotational device, an expansile device, a wave-like undulating device, and a longitudinally-actuated device.

3. (Once Amended) A thrombolytic device as in claim 1, wherein said motor is connected to a physical, rotational device operated at a slow speed.

C 3 9. (Once Amended) A thrombolytic device as in claim 1, wherein said catheter wall has a braided construction.

10. (Once Amended) A thrombolytic device as in claim 1, wherein said catheter wall has a plurality of flexible projections extending externally therefrom.

11. (Once Amended) A thrombolytic device as in claim 10, wherein said flexible projections are selected from the group consisting of brushes, bristles, deformable mesh braid, flexible wires and tentacles.

12. (Once Amended) The thrombolytic device of claim 1, further comprising a motor controller connected to said motor, said motor controller is capable of controlling the speed of the motor from 0.1 to 600 revolutions per minute.

13. (Once Amended) A thrombolytic device as in claim 12, wherein said motor controller is programmable by the user as to motor speed, activation time, and deactivation time.

C 3 14. (Once Amended) A thrombolytic device as in claim 13, wherein said motor controller is programmable by the user to control a motor speed of from about 0.1 and 600 revolutions per minute, an activation time, and a deactivation time.

C 4 16. (Twice Amended) A thrombolytic device for use with a pharmacological agent comprising:

a catheter having a catheter wall, a proximal end, a distal end, and at least one lumen;
a motor attached to said proximal end of said catheter for imparting motion to said catheter along a segment of said catheter between said distal end and proximal end, said motion being capable of disrupting a thrombus;

5 a pharmacological delivery conduit with a first end and a second end, said first end operatively connected to said lumen at said proximal end of said catheter;

10 a pump for delivering a pharmacological agent, said pump operatively connected to said second end of said conduit.

C 5 20. (Twice Amended) A pharmomechanical device, comprising:

means to increase the surface area of a clot in a vascular structure such that said clot can be dissolved by a lytic agent; and

5 means for providing mechanical motion to a catheter throughout a length of a vessel for a prolonged period of time while said lytic agent is acting, said means for providing mechanical motion comprising a corkscrew catheter configuration substantially incapable of damaging an endothelium of said vascular structure, said means for providing mechanical motion causing said catheter to rotate once it is inserted inside a patient.

C 6 24. (Once Amended) The device as set forth in Claim 20, wherein said means for providing mechanical motion operates intermittently and over a prolonged period of time.

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25. (Once Amended) The device as set forth in Claim 24, wherein said means for providing mechanical motion provides for a time of inactivity at least as great as a time of activity of said device.

26. (Once Amended) The device as set forth in Claim 20, wherein said means for providing mechanical motion generates vibrations effective to disrupt a clot, but does not promote hemolysis or cause damage to an endothelium.

27. (Once Amended) The device as set forth in Claim 20, wherein said device extends for a substantial length of said vessel.

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31. (Twice Amended) A method for ameliorating a clot in a patient's blood vessel, comprising:

administering to a patient an amount of contrast medium to determine the extent of a thrombus in the patient's blood vessel;

5 selecting a catheter having an appropriate length segment, said length segment having a mechanically active portion and an aperture-containing portion, said step of selecting conducted so that said length segment spans the entire length of a clot contained within said patient's blood vessel;

inserting a catheter into said patient's blood vessel;

10 deploying a distal occlusion element to reduce undesired passage of a thrombolytic drug from said blood vessel;

programming a motor controller to obtain desired periods of activation and inactivation of said mechanically active portion;

15 intermittently activating said mechanically active segment to remove said clot from said blood stream;

infusing a desired thrombolytic agent through said catheter when said mechanically active portion is activated; and

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observing the patient in a location remote from the patient during at least one of said steps of intermittently activating and infusing.

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41. (Once Amended) The device as set forth in Claim 20, wherein an intermittent mechanical motion of the catheter is caused by the delivery of a lytic agent in pulses, said pump being programmable to deliver the lytic agent in pulses.

42. (Once Amended) The device as set forth in Claim 41, wherein said pump is programmed to deliver said lytic agent at a desired frequency or duration.